

Dealing with a small volume of seepage. Diversion, Dilution, Treatment, or a little bit of everything? Saddle Dam Seepage - from Optioneering to Construction

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ABSTRACT

Following closure of the OceanaGold's Reefton Gold Project (RGP) facility, the majority of runoff and seepage is captured and treated via the recently constructed vertical flow reactor (VFR) before discharge to the receiving surface water environment. A small (~ 1-2 L/sec) volume of collected seepage (which is elevated in iron and arsenic) from the chimney, toe and seepage bund drains of the Saddle Dam 1 - an embankment of the Fossikers TSF, is currently captured at the base of the embankment and is pumped back into the Fossikers Basin, without treatment. Long term, this seepage requires a suitable management solution to avoid potential compliance issues and visual amenity issues at the discharge point and the receiving surface water environment.

An options assessment of treatment and/or management methods was undertaken to assess the most suitable option (with cost effectiveness and low maintenance the key drivers) for the management / treatment of this seepage. This presentation outlines the identification and shortlist of available options, the resultant Multi-Criteria Assessment (MCA) workshop undertaken, selection of the preferred option, through to design and construction.